

Diagrams for the Determination of the Harmonic Composition of SOV/105-59-7-1A/30
the Magnetization Current When Superimposing a Constant Field on an Alternating
Field

they were carried out at relatively high values of the constant component of magnetic field strength, which attained 120 a/cm. The results obtained by experiments carried out with the small samples are in good agreement with those carried out with apparatus of high efficiency. It was found that even a small deviation of magnetic flux from the sinusoidal shape influences the harmonic composition of the magnetization current considerably. The initial angles of the shifting of the highest harmonics of the magnetization current with respect to the first harmonic depend on the losses in the apparatus and on the resistance of the external circuit. Figures 1 and 2 show the diagrams for steel K41, and figures 3 and 4 show those for steel E310. These diagrams were made on the basis of experimental results and calculations. The diagrams make it possible to determine the harmonic composition of the magnetization current with the simultaneous action of the direct- and alternating fields with an accuracy of up to 10% in the case of the first harmonic, and of up to 40% in the case of the second, third, and fourth harmonic. An example is given for the calculation of the harmonic

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Diagrams for the Determination of the Harmonic Composition **SOV/105-59-7-14/30**
of the Magnetization Current When Superimposing a Constant Field on an Alternating
Field

composition of the magnetization current by means of the
diagrams given. There are 5 figures and 1 Soviet reference.

ASSOCIATION: Energeticheskii institut Akademii nauk SSSR (Institute of Power
Engineering of the Academy of Sciences of the USSR)

SUBMITTED: April 20, 1959

Card 3/3

S/196/61/000/010/018/037
E194/E155

AUTHORS: Libkind, M.S., and Kugushev, G.I.

TITLE: A three-phase saturating reactor with sinusoidal current

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.10, 1961, 13, abstract 10I 85. (Elektroenergetika, no.2, 1960, 134-145)

TEXT: The article considers the schematic circuit, construction and design of a symmetrical saturable reactor formed by the stator of an induction or synchronous motor whose normal rotor is replaced by a stationary cylinder of laminated ferro-magnetic material. It is shown that if in a symmetrical three-phase system the reserve of magnetic energy is a constant value then the current and voltage contain no higher harmonic components of positive and negative phase-sequence. Therefore, with star or delta connection the current drawn by the reactor from the system should be sinusoidal. Here the magnetic flux in the reactor can vary according to a fairly complicated law. The procedure is used to calculate the volt-ampere characteristics of two types of

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A three-phase saturating reactor ... S/196/61/000/010/018/037
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saturable reactor of permalloy with a bore diameter of 73 mm and three models of steel shell (E-11) with bore diameter of 200 mm; the results are in good agreement with experiment. Design data and test results of the various models are given and compared with calculated values. The calculations show that a saturable reactor can be built with an output of the order of some tens of MW and of satisfactory economic characteristics. The effectiveness of a saturable reactor for cross-compensation of a.c. transmission lines can be considerably improved if it is made variable. 6 illustrations. 6 literature references.

[Abstractor's note: Complete translation.]

Card 2/2

MOROZOV, A.; GOLUBEV, S., kand.tekhn.nauk; KUGUSHEV, I., inzh.;
KHAYDUROV, I., inzh.

Standardized farm buildings made of mesh-reinforced concrete
elements. Na stroi. Ros. no.11:32-34 N '61. (MIRA 16:7)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR
(for Morozov).
(Farm buildings) (Precast concrete construction)

KUGUSHEV, I.D., inzhener.

From the history of the study of screen belt vibration. Dum.prom.

29 no.6:14-15 Je '54.

(MLRA 7:8)

(Papermaking machinery)

KUGUSHEV, I.D., inzhener.

Effect of the shaking of the screen stand on the even distribution of fiber in paper. *Bum.prom.* 29 no.8:14-18 Ag '54. (MLRA 7:9)
(Papermaking machinery)

KUGUSHEV, I.D., kandidat tekhnicheskikh nauk.

Use of radioactive isotopes to study the structure and the
molding of paper. Bum. prom. 31 no.11:15 N '56. (MLRA 10:2)

1. Leningradskiy politekhnicheskiy institut imeni M.I. Kalinina.
(Paper--Testing) (Radioisotopes--Industrial applications)

KUGUSHEV, I.D., inzhener-mekhanik.

Vacuum fluctuations in the suction roll system.
no.4:17 Ap '57.

Bum.prom. 32
(MLBA 10:7)

(Papermaking machinery) (Vacuum)

KUGUSHEV, I.D.; MOROZOVA, Yu.G.

Water filtration through a layer of paper stock. Bum. prom. 32 no.5:
11-12 My '57. (MLRA 10:6)

1. Leningradskiy politekhnicheskii institut im. M.I. Kalinina.
(Papermaking machinery) (Filters and filtration)

KUGUSHEV, I.D., kand. tekhn. nauk, dots.; MOKSHIN, F.A., slesar'-mekhanik;
ROGOVSKIY, V.P.

Instrument for determining the transparency of tracing paper. Bum.
prom. 32 no.10:11-12 0 '57. (MIRA 11:1)

1. Leningradskiy politekhnicheskoy institut im. M.I. Kalinina (for
Kugushev). 2. Bumazhnaya fabrika "Kommunar" (for Mokshin). 3. Nachal'-
nik laboratorii kontrol'no-izmeritel'nykh priborov bumazhnoy fabрики
"Kommunar" (for Rogovskiy).
(Photoelectric cells) (Paper--Testing)

KUGUSHEV, I.D.

Dewatering action of a table roll. Bumagodel.mash. no.6:
124-137 '58. (MIRA 13:8)
(Papermaking machinery)

ABRAMOVICH, A.D.; BIRYUKOV, V.I., inzh.; KUGUSHEV, I.D., kand. tekhn. nauk

Method for selecting a vacuum pump for papermaking machines. Bum.
prom. 33 no. 6:20-23 Ja '58. (MIRA 11:7)

1. Glavnyy inzhener Parvey Leningradskoy bumazhnoy fabriki (for
Abramovich).

(Papermaking machinery)
(Vacuum pumps)

PANKOV, D.L.; KUGUSHEV, I.D.

Construction of a device for automatic weighing of paper.
Bum. prom. 33 no.8:6-9 Ag '58. (MIRA 11:10)

1. Leningradskiy politekhnicheskij institut imeni M.I.Kalinina.
(Radioisotopes--Industrial applications) (Paper)

KOLCHIN, N.L.; KUGUSHEV, I.D.

Selecting the diameter of the tube rolls. Bumagodel.mash. no.7:
97-102 '59. (MIRA 13:5)

(Papermaking machinery)

KUGUSHEV, I.D.; BIRYUKOV, V.I.; ZHUKOV, G.G.

Design of the suction system of couch rolls. Bumagodel.mash.
no.7:103-108 '59. (MIRA 13:5)
(Papermaking machinery)

KUGUSHEV, I.D.; DASHKIN, M.D.; BIRYUKOV, V.I.

Applying the electrolytic method to the measurement of paper
sheet moisture. Trudy Sib.tekh.inst. no.23:56-62 '59.

(MIRA 14:4)

; (Paper)

KUGUSHEV, I.D.; ZHUKOV, G.G.

Shape of cylinder grates of a round wire papermaking machine.
Bum. prom. 34 no.11:16-17 N '59. (MIRA 13:3)

1. Leningradskiy politekhnicheskii institut.
(Papermaking machinery)

KUGUSHEV, Il'ya Dmitriyevich, dots., kand. tekhn. nauk; FADEYEV, N.K.,
red.

[Fundamentals of the theory of the design of papermaking machinery]
Osnovy teorii rascheta bumagodelatel'nykh mashin; konspekt lektsii.
Leningrad, Leningr. politekhn. in-t im. M.I.Kalinina, Pt.1. 1961.
173 p. (MIRA 14:10)

(Papermaking machinery)

KUGUSHEV, I.D.; BIRYUKOV, V.I.

Improved drying of paper on a couch roll. Bum. prom. 36 no.7:
8-9 J1 '61. (MIRA 14:9)

1. Leningradskiy politekhnicheskoy institut im. M.I.Kalinina (for
Kugushov). 2. Sibirskiy lesotekhnicheskoy institut (for Biryukov).
(Paper)

KUGUSHEV, Il'ya Dmitriyevich; FADEYEV, N.K., red.

[Fundamentals of the theory of the design of papermaking machinery] Osnovy teorii rascheta bumagodelatel'nykh mashin; konspekt lektsii. Leningrad, Leningra politekhn. in-t im. M.I.Kalinina. Pt.2. 1962. 117 p. (MIRA 15:111)

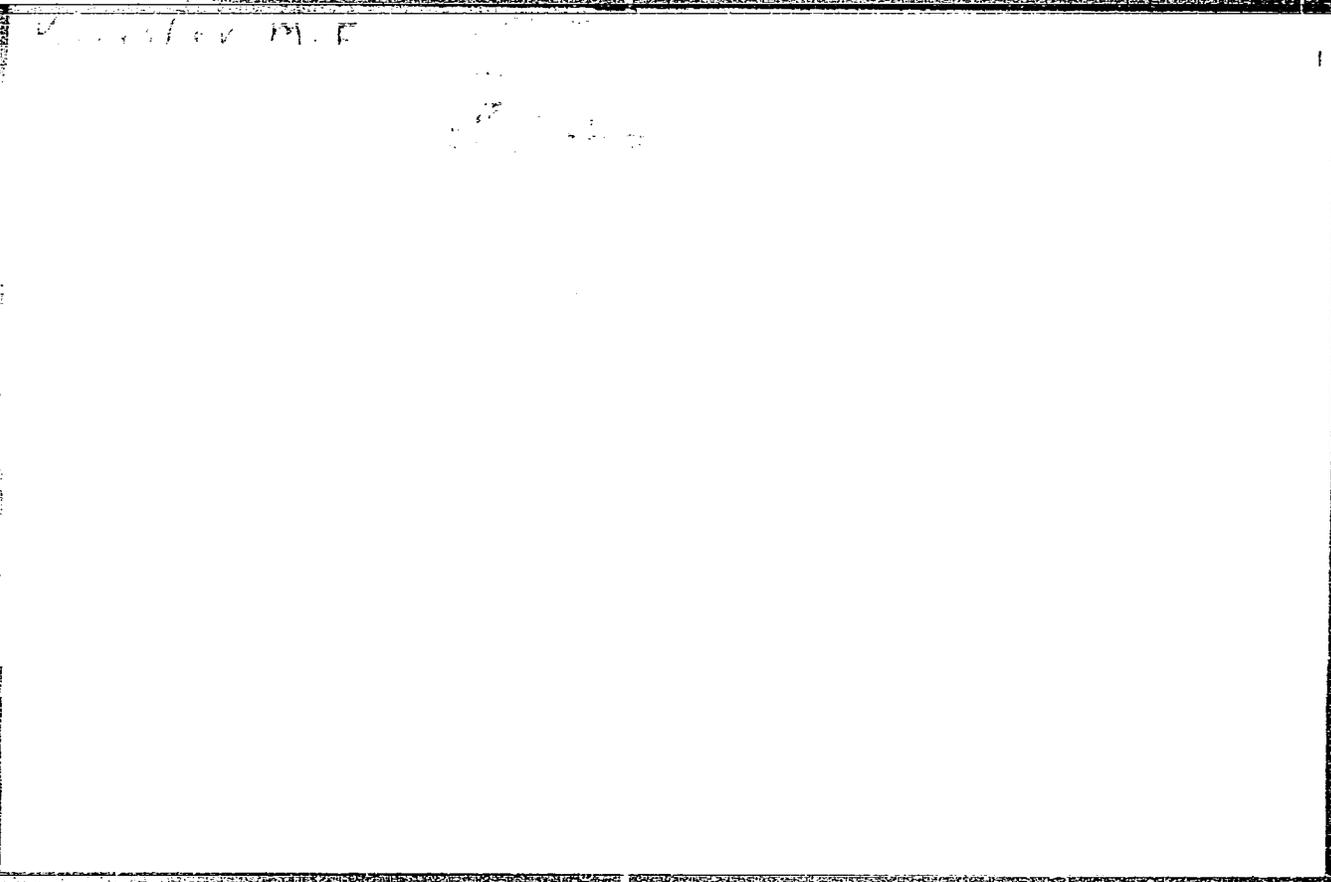
(Papermaking machinery)

TANSKIY, V.V.; KOYENMAN, G.P.; VOZHENKO, G.V.; GORDONOVA, S.M.; KUGUSHEV, I.N.; GENIN, M.Ya; VISHNEVSKIY, A.V., red.; AVINOVITSKIY, I.Ya., inzh. nauchn. red.; GORCHAKOV, A.V., ctv. red.; RASKIN, Yu.A., red.

[Plastics in construction] Plastmassy v stroitel'stve; tematicheskii sbornik. Moskva, TSentr.biuro tekhn.informatsii tekhn. upravleniia, 1960. 156 p. (MIRA 14:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Vishnevskiy). 2. TSentral'noye byuro tekhnicheskoy informatsii (for Raskin).

(Plastics) (Building materials)



SEREDENKO, M.M., kand.ekon.nauk; KUGUSHEV, M.F. [Kulushov, M.F.];
PRAVDIN, M.V.; FOMICHEV, V.I.; ALEKSANDROVA, V.P.; GORODETSKIY,
N.I. [Horodets'kyi, N.I.]; DYATLOV, T.I.; KALITA, M.S. [Kalyta,
M.S.]; DARAGAN, M.V. [Daraban, M.V.]; RADINA, Yu.M.; VOROB'YEVA,
K.T. [Vorobyova, K.T.]; LASTIVKA, N.N.; STARODUBSKIY, R.D.
[Starodubs'kyi, R.D.]; YATSENKO, P.F.; MUROMTSEVA, G.M.
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I.I. [Kobyliakov, I.I.]; ALEKSANDROVA, V.O., kand.ekon.nauk,
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tekh.red.

[Ways of increasing profits in metallurgical industries] Shliakhy
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Vyd-vo Akad.nauk URSS, 1961. 93 p.

(MIRA 14:6)

1. Akademiya nauk USSR, Kiyev. Institut ekonomiki. 2. Institut
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Daragan, Radina). 3. Dnepropetrovskiy khimiko-tekhnologicheskii
institut (for Gorodetskiy, Dyatlov). 4. Dneprodzerzhinskiy
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(Dnepropetrovsk Province--Steel industry--Costs)

SEREDENKO, M.M., doktor ekon. nauk; ALEKSANDROVA, V.P.; KUGUSHEV, M.F. [Kuhushev, M.F.]; SHEVCHENKO, Ya.O.; GLAMAZDA, A.D. [Hlamazda, A.D.]; ZABORSKAYA, Z.M. [Zabors'ka, Z.M.]; KHOTIMCHENKO, M.M. [Khotymchenko, M.M.]; YATSKOV, V.S.; MEDVEDEV, V.M. [Medvediev, V.M.]; CHIRKOV, P.V. [Chyrkov, P.V.]; KHARCHENKO, P.F.; SOTCHENKO, Z.Ya.; PROFATILOVA, L.M. [Profatylova, L.M.]; MAULIN, M.O.; GORELIK, L.Ye. [Horelik, L.IE.]; RIZHKOV, I.I. [Ryzhkov, I.I.]; ZHEREBKIN, G.P. [Zherebkin, H.P.]; KHRAMOV, O.O.; LANDYSH, B.O., red.; ROZENTSVEYG, Ye.N. [Rozentsveih, IE.N.], tekhn. red.

[Economic efficiency of capital investments and the introduction of new machinery in industry] Ekonomichna efektyvnist' kapital'nykh vkladov i vprovadzhennia novoi tekhniki u promyslovosti. Kyiv, Vyd-vo Akad. nauk URSR, 1962. 260 p. (MIRA 16:2)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
(Capital investments) (Technological innovations)

YEMEL'YANOV, A.V.; SEREDENKO, M.N.; KUGUSHEV, M.F.

Economic aspects of the manufacture and use of high quality rolled products. Met. i gornorud. prom. no.2:32-33 Mr-Ap '65.

(MIRA 18:5)

KUGUSHEV, N. G.

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Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

KUTAF'YEV, S.A. [deceased]; SCHASTNEV, P.N.; NIKOL'SKIY, I.V.; KUGUSHEV, N.G.; AKSARIN, I.I.; SITNIKOV, G.G. [deceased]; LYUBIMOV, I.M., red.; CHENTSOVA, V.A., red.kart; KOSHELEVA, S.M., tekhn.red.

[Russian Soviet Federative Socialist Republic; economic-geographical features] Rossiiskaia Sovetskaiia Federativnaia Sotsialisticheskaiia Respublika; ekonomiko-geograficheskaiia kharakteristika. Moskva, Gos.izd-vo geogr.lit-ry, 1959.
867 p. (MIRA 13:2)

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(Russia--Economic conditions)

LAVRISHCHEV, Aleksey Nikitich, doktor geogr. nauk, prof.;
PALAMARCHUK, M.M., prof., retsenzent; SLAVIN, S.V.,
prof., retsenzent; RYAZANTSEV, S.N., dots., retsenzent;
KUGUSHEV, N.G., dots., retsenzent; KISTANOV, V.V., kand.
ekon. nauk, retsenzent; GLYAZER, L.S., red.; TARASOVA,
T.K., mlad. red.; PONOMAREVA, A.A., tekhn. red.;
GERASIMOVA, Ye.S., tekhn. red.

[Economic geography of the U.S.S.R.; general part, the
geography of industry, agriculture, and transportation]
Ekonomicheskaja geografiia SSSR; obshchaia chast', geog-
rafiia promyshlennosti, sel'skogo khoziaistva i trans-
porta. Moskva, Izd-vo "Ekonomika," 1964. 558 p.
(MIRA 17:3)

Kugushev, N. M.

Authors: Dolzhal, M. A., Krainin, A. K., Alshchenskii, P. I., Gritsenko, A. P., Florinsky, B. V., Minkalin, M. Ye., Yemal'yanov, A. Ye., Kugushev, N. M., Sharapov, V. K., Mityayev, Yu. I., Galanin, A. M.
Title: A Uranium-Graphite Reactor With Superheating of Steam of High Pressure. II (Uran-grafitovyy reaktor s peregrevom para visokogo davleniya) (Continued from abstract 2/15)

Periodical: Atomnaya energiya, 1958, Vol. 5, No. 5, pp. 235-244 (USCR)
Abstract: The graphite mantle of the reactor (diameter 9.6 m, height 9 m) is filled with nitrogen in order to prevent burnout of the graphite. The height of 6 m above the reactor has a diameter of 7.2 m and a steel shell is used. Graphite reflector graphite is 0.6 m thick. A reflector and above it a layer of thickness is used as upper reflector. The graphite mantle is cooled from above at the main lower reflector. In the graphite structure openings for active channels are provided. 730 of them are provided with fuel elements which are cooled by means of boiling water and contain up to 3% percentage by weight of steam at the output. 266 channels are cooled by steam which is heated by the core. Six channels contain the automatic regulating temperature. Six channels contain the automatic regulation temperature. Six channels are provided for the compensation rods and 15 channels are provided for the control rods and counting tubes are located in the graphite mantle. The regulating and control rods are placed in form of drawings. The circuit diagram for the reactor turbine shows the connection between the reactor, the two-stage turbine, two condensers, a system of additional heating of the feed-water, a de-aerator (5 atm), 2 preheaters (for high pressure), condensation and feed pumps. The water is conveyed into the boiling channels by way of the centrifugal pumps. When entering these channels the water has a temperature of 300 C and a pressure of 155 atm. The temperature of steam and water formed in these channels reaches the reactor, where steam and water are separated. From here the water, where steam and water are separated, is conveyed to the preheater of the steam generator (which consists of 2 preheaters) where it is cooled from the saturation temperature of 340 C (pressure in the reactor 150 atm) down to 300 C. Heat is transferred to the water of the secondary circuit. The water of this circuit is in the first section of the preheater brought from a temperature of 100 C to saturation temperature, which corresponds to a pressure of 10 atm. In the second part it is superheated to 150 C. The secondary steam produced in the secondary circuit is used in the steam turbine of the reactor where it is heated up to a temperature of 310 C. The steam turbine has three stages with a pressure of 90 atm and a temperature of 300 C. The main building of the electric power plant consists of 4 parts arranged one behind the other, the machine hall, the generator room, the de-aerator, and the reactor hall. For an average cycle of 730 days it is shown by calculation that the cost of electricity are equal to the kWh obtained by means of the usual fuel. Fuel costs amount to from 30 to 40% of the total costs. It is shown that the cost of electricity obtained by means of the reactor is much richer in uranium the average cycle can be increased, which leads to a reduction of costs. There are 9 active fuel elements

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elements which are cooled by means of boiling water and contain up to 3% percentage by weight of steam at the output. 266 channels are cooled by steam which is heated by the core. Six channels contain the automatic regulating temperature. Six channels contain the automatic regulation temperature. Six channels are provided for the compensation rods and 15 channels are provided for the control rods and counting tubes are located in the graphite mantle. The regulating and control rods are placed in form of drawings. The circuit diagram for the reactor turbine shows the connection between the reactor, the two-stage turbine, two condensers, a system of additional heating of the feed-water, a de-aerator (5 atm), 2 preheaters (for high pressure), condensation and feed pumps. The water is conveyed into the boiling channels by way of the centrifugal pumps. When entering these channels the water has a temperature of 300 C and a pressure of 155 atm. The temperature of steam and water formed in these channels reaches the reactor, where steam and water are separated. From here the water, where steam and water are separated, is conveyed to the preheater of the steam generator (which consists of 2 preheaters) where it is cooled from the saturation temperature of 340 C (pressure in the reactor 150 atm) down to 300 C. Heat is transferred to the water of the secondary circuit. The water of this circuit is in the first section of the preheater brought from a temperature of 100 C to saturation temperature, which corresponds to a pressure of 10 atm. In the second part it is superheated to 150 C. The secondary steam produced in the secondary circuit is used in the steam turbine of the reactor where it is heated up to a temperature of 310 C. The steam turbine has three stages with a pressure of 90 atm and a temperature of 300 C. The main building of the electric power plant consists of 4 parts arranged one behind the other, the machine hall, the generator room, the de-aerator, and the reactor hall. For an average cycle of 730 days it is shown by calculation that the cost of electricity are equal to the kWh obtained by means of the usual fuel. Fuel costs amount to from 30 to 40% of the total costs. It is shown that the cost of electricity obtained by means of the reactor is much richer in uranium the average cycle can be increased, which leads to a reduction of costs. There are 9 active fuel elements

Card 2/4

elements which are cooled by means of boiling water and contain up to 3% percentage by weight of steam at the output. 266 channels are cooled by steam which is heated by the core. Six channels contain the automatic regulating temperature. Six channels contain the automatic regulation temperature. Six channels are provided for the compensation rods and 15 channels are provided for the control rods and counting tubes are located in the graphite mantle. The regulating and control rods are placed in form of drawings. The circuit diagram for the reactor turbine shows the connection between the reactor, the two-stage turbine, two condensers, a system of additional heating of the feed-water, a de-aerator (5 atm), 2 preheaters (for high pressure), condensation and feed pumps. The water is conveyed into the boiling channels by way of the centrifugal pumps. When entering these channels the water has a temperature of 300 C and a pressure of 155 atm. The temperature of steam and water formed in these channels reaches the reactor, where steam and water are separated. From here the water, where steam and water are separated, is conveyed to the preheater of the steam generator (which consists of 2 preheaters) where it is cooled from the saturation temperature of 340 C (pressure in the reactor 150 atm) down to 300 C. Heat is transferred to the water of the secondary circuit. The water of this circuit is in the first section of the preheater brought from a temperature of 100 C to saturation temperature, which corresponds to a pressure of 10 atm. In the second part it is superheated to 150 C. The secondary steam produced in the secondary circuit is used in the steam turbine of the reactor where it is heated up to a temperature of 310 C. The steam turbine has three stages with a pressure of 90 atm and a temperature of 300 C. The main building of the electric power plant consists of 4 parts arranged one behind the other, the machine hall, the generator room, the de-aerator, and the reactor hall. For an average cycle of 730 days it is shown by calculation that the cost of electricity are equal to the kWh obtained by means of the usual fuel. Fuel costs amount to from 30 to 40% of the total costs. It is shown that the cost of electricity obtained by means of the reactor is much richer in uranium the average cycle can be increased, which leads to a reduction of costs. There are 9 active fuel elements

Card 3/4

KUGUSHEV, N.M.

21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Energy, 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energiya. (Reports of Soviet Scientists; Nuclear Reactors and Atomic Power) Moscow, Akademiya, 1958. 707 p. (Series: Ita; Trudy, vol. 2) Kyrata slip inserted. 8,000 copies printed. General Eds.: M.A. Dollezhel, Corresponding Member, USSR Academy of Sciences, A.K. Kuzin, Doctor of Physical and Mathematical Sciences, A.I. Leyzunsky, Member, Ukrainian SSR Academy of Sciences, I.I. Kurovov, Corresponding Member, USSR Academy of Sciences, and V.J. Kursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazal'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Kursov is the science editor of this volume. See SOV/2061 for titles of all volumes of the set. References appear at the end of the articles.

Dollezhel, M. A., A. E. Krasin, M. A. Mikhalyn, A. M. Grigor'yants, and V. I. Ushakov. Experiments of Operating the First Atomic Power Plant in the USSR and the Plant's Work Under Boiling Conditions (Report No. 2183) 15

Dollezhel, M. A., A. E. Krasin, P. I. Alchubumsky, A. M. Grigor'yants, V. I. Ushakov, A. G. Mikhaylov, G. I. Fedotkin, M. A. Kravchenko, V. A. Shklyarskiy, V. G. Mikhaylov, and A. M. Gorbunov. Graphite-Uranium Reactor With High-Pressure Steam Separator (Report No. 2139) 36

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Sizintsev, N. V. and P. G. Rudzikh. Radiation Safety System of the Atomic Icebreaker (Report No. 2516) 87

Khorozov, S. A. Water-water Power Reactors (VVER) in the USSR (Report No. 2184) 95
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Kruglyan, G. M. and V. I. Subbotin. Cooling Water-water Reactors (Report No. 2144) 134

Yerashov, V. S. and I. V. Yegorov. A Study of Unsteady Heat Transfer at Heat-producing Elements of Nuclear Reactors (Report No. 2476) 153

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КУГУШЕВ, П. А.

②
Removal from the atmosphere of cyanide dust and cyanide compounds which are produced in cyaniding of steel. P. A. Kugushev (Ind. Hyg. Inst., Gorki). *Gigiena i Sanit.* 1953, No. 8, 42-6.—The problems of working conditions in cyaniding plants are detailed in respect to the content of CN compds. in the air. Ventilation measures are described as are the results of typical dust analysis in various parts of such installations. A suggested air filter is made from rusty Fe shavings irrigated with dil. alkali such as 5% NaOH or KOH.
G. M. Kosolapov

Kugushev, P.A.

AID P - 2191

Subject : USSR/Medicine
Card 1/1 Pub. 37 - 11/19
Author : Kugushev, P. A.
Title : Working conditions of dyeing articles in an electrostatic field
Periodical : Gig. i san., 5, 47-49, My 1955
Abstract : The author describes the pulverization method of coloring articles in an electrostatic field, which he studied in a plant (name not given). Analyzes the harmful substances in the air and gives recommendations for the improvement of the ventilation system. Sketch, tables.
Institution : Gor'kiy Laboratory, All-Union Scientific Research Institute of Labor Protection of the All-Union Central Council of Trade-Unions
Submitted : F 16, 1954

KUGUSHEV, P.A. (Gor'kiy).

Two-stage dust extractor with a water film used in air and gas
purification. Vod. i san. tekhn. no.3:36-37 Mr '58. (MIRA 11:3)
(Air--Purification) (Dust--Removal)

GALUSHKO, K.; KUGUSHEV, V.

About V.D. Iysenko's article "Safety specialists in mines". Bezop. truda
v prom. 2 no.11:19 N '58. (MIRA 11:11)

1. Starshiy inzhener tekhnicheskogo otdela Luganskogo sovnarkhoza (for
Galushko). 2. Zamestitel' nachal'nika tekhnicheskogo otdela Kemerovskogo
sovnarkhoza. (for Kugushev).

(Mining engineering--Safety measures)

DURAS, T.I.; DEVIATKINA, M.S.; KARMANOVA, Ye.V.; KUGUSHEVA, R.Kh.

Characteristics of a semiactive focus of tick-borne encephalitis
in the vicinity of the town Nakhodka. Dokl. Irk. gos. nauch.-issl.
protivochum. inst. no.5:20-22 '63 (MIRA 18:1)

ANOSOV, A.S.[deceased]; BARBASH, I.D.; KOMKOV, V.N.; KOSTAREV, V.N.;
KUGUSHEVA, V.M.; POLYAKOV, V.S., prof., red.

[Laboratory manual for a course on machine parts] Uchebnoe
posobie k laboratornym rabotam po kursu detalei mashin. 2. izd.
dop. i perer. [By A.S.Anosov i dr. Leningrad, Leningr. poli-
tekh. in-t im. N.I.Kalinina, 1964. 55 p. (MIRA 18:4)

KUHAR, Andraj, inz.

One word more on refrigerators. Stroj vest 8 no.3:Suppl.:
Perocila TZV 2 no.3:93-94 Je '62.

1. Tovarna zeleznicnih vozil "Boris Kidric", Maribor.

KUHAR, F.

19

✓ Protection of metal parts from corrosion during shipment and storage. IV. Shipping tests. Ferenc Kúhár (Nehézszerkezet Kutató Intézet, Veszprém, Hung.). *Nehézszerkezet Kutató Intézet Közleményei* 1, 171-4 (1958).—Various packaging materials, methods, corrosion inhibitors, and coatings were service-tested by shipping parts via a combined rail-boat passage from Budapest to Shanghai, China, and return, without unpacking. The conditions of the containers and cargo were examd. in the lab. prior to and following the voyage. Purpose of this investigation was to develop a correlation between lab. tests and actual service conditions.

G. J. Ernyel

BS
1/1

KUHAR, F.

Distr: hE2c

18/60 The application of a chromate coating to thin zinc coatings. Gy. Kemény, F. Kuhar, *Usp.*, Vol. 11, 1959, No. 4, pp. 155-156. 689.581.26

A chromic acid-sulphuric acid bath was prepared for the safe and effective chromate-coating of thin electroplated zinc coatings. The colour of the coatings formed in the *Afchromat 100* bath can be varied from a greenish-yellow to dark brown. The adhesion of the coating is perfect and its resistance to mechanical stresses was found adequate. The bath can be supplemented and thus coatings of identical quality, having a good protective effect, can be permanently produced. The coatings can be produced to best advantage as priming, considerably increasing the adhesion and protective action of paint.

o.a.

COUNTRY : Hungary H-4
CATEGORY :
ABS. JOUR. : RZKhim., No. 1960, No. 18190
AUTHOR : Kuhar, F. and Katona, E.
INST. : Not given
TITLE : Corrosion in Chemical Plants

ORIG. PUB. : Magyar Kem Lapja, 14, No 5, 206-213 (1959)

ABSTRACT : The economic loss caused by corrosion is demonstrated on the basis of data for a Hungarian chemical plant. The authors present methods of corrosion control with special emphasis on corrosion in plants in which the conversion of CO is carried out at high pressures. Experience with the corrosion protection of various types of equipment, overhead and underground pipes, and storage tanks is described.

D. Pyushpeki

CARD: 1/1

208

KUHARIC, Aleksander

Chemical Abst.
Vol. 48 N. 6
Mar. 25, 1954
Foods

(2)
The preparation of protein from castor-bean husks. Aleksander Kuharic (Inst. Ind. Research, Ljubljana, Yugoslavia). *Kem. Zbornik* 1954, 157-0. - The husks of castor beans, which remain after the oil is pressed out, are used as a starting material for the prepn. of protein (I). The husks were extd. in a Soxhlet extractor and the I was detd. by the Kjeldahl method. The percentage of I was 44.25%.
J. Rovtar Leach

STOJKOVIC, I.

Stojkovic, I. Kuharic, A.

"The Extraction of Potassium Chlorate From Sea Water." p. 55.
(Nova Proizvodnja, Vol. 4, no. 1, Apr. 1953, Ljubljana.)

SO: Monthly List of East European Accessions, Vol. 2, No. 9, Library of Congress, September
1953, Uncl.

KuhbLi, AUTON

KuhbLi, AUTON

Source: Mathematical Reviews

Source: Mathematical Reviews

2000

0001
0002

KUHÉLJ, A

(2)
Kuhelj, A. Energy criterion of elastic stability for thin shells. Acad. Serbe Sci. Publ. Inst. Math. 3, 77-102 (1953).

The author extends to curvilinear co-ordinates the considerations of Trefftz [Z. Angew. Math. Mech. 13, 160-165 (1933); 15, 101-108 (1935)] concerning elastic stability. The criterion for critical load is $\delta(\Delta E - \Delta A) = 0$, where ΔE is the increment in the elastic energy of the body in a small but not infinitesimal displacement from a given loaded configuration and ΔA is the work of the external forces in producing this deformation. The method is one of power series expansion, only the terms of second order in the displacements being retained, and the stress and strain increments are supposed related by the linear Hooke's law. In this way differential equations for the critical stresses are obtained (§6). The paper concludes by outlining a similar analysis for the Love theory of the bending of thin shells. The author gives a relatively simple expression for the quantity whose variation is to be zero, but he states that the actual variational equations are too complicated to be written down explicitly.

C. Truesdell.

KUHELJ, A.

Yugoslavia

The Institute for jet engines in Ljubljana

SO: Energie Technik, March 1956, Uncl.

KUHELJ, A.

"Kinetic stability of elastic systems" by W.W.Bolotin [Bolotin, V.V.]. Translated by G. Schmidt. Reviewed by A.Kuhelj. Rud met zbor no.1:77-78 '62.

KUHELJ, A.

"The high-speed aerodynamics" by F.Dubs. Reviewed by A.Kuhelj.
Stroj vest #no.1/2:29 Ap '62.

PRELOG, E.; MUREN, H.; LOBE, F.; KUHELJ, Anton, akad., prof. dr. inž. (Ljubljana); SELJAK, Zoran, inž.; LIKAR, B.; LESKOVAR, P.; KRAUT, Bojan, prof. inž. (Ljubljana); STRUNA, Albert, prof. inž. (Ljubljana).

Book reviews. Stroj vest 9 no.6:170-172 D*63.

1. Glavni in odgovorni urednik, "Strojnistki vestnik" (for Kraut).
2. Fakulteta za strojninstvo univerze v Ljubljani. (for Seljak).
3. Clan Urednistva, "Strojnistki vestnik" (for Kuhelj, Struna).

KUHELJ, Anton, akad, dr inz., redovni profesor (Ljubljana, Zupanciceva 10)

Flow of an ideally incompressible fluid in the interspace of
Kaplan turbines. Tehnika Jug 18 no.6:985-990. Je '63.

1. Universitet u Ljubljani.

KUHITSA, L.K. USSR/General Problems of Pathology. Neoplasms. U

Abs Jour: Ref Zhur-Biol., No 8, 1958, 37368.

Author : Kuhitsa, L.K.

Inst :

Title : Some New Data on the Morphology of Lung Cancer Cells
in Sputum.

Orig Pub: Vopr. onkologii, 1957, 3, No 4, 442-446.

Abstract: No abstract.

Card : 1/1

182

LIST AND /OR ORDER PROCESSES AND PROPERTIES INDEX

8

The formation of kaolin and alunitic in the eastern part of the Holy Cross Mountains, near Sandebers. J. Kuz... *Bull. intern. acad. polonaise* 1931A, 665-75 (in German). —Microscopical and chem. investigations of a white substance in veins between slate and quartzite show that it belongs to the kaolin class, with $Al_2O_3:SiO_2:H_2O = 1:2.15:1.80$. It has been formed by action of small amts. of H_2SO_4 , formed from pyrite, on the aluminosilicates contained in the slate. The veins contain also epsonite, mirabilite and alunogen (keramohalite).
J. WINKELBAK

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1931A

TEST AND ANALYSIS PROCESSES AND PROPERTIES INDEX

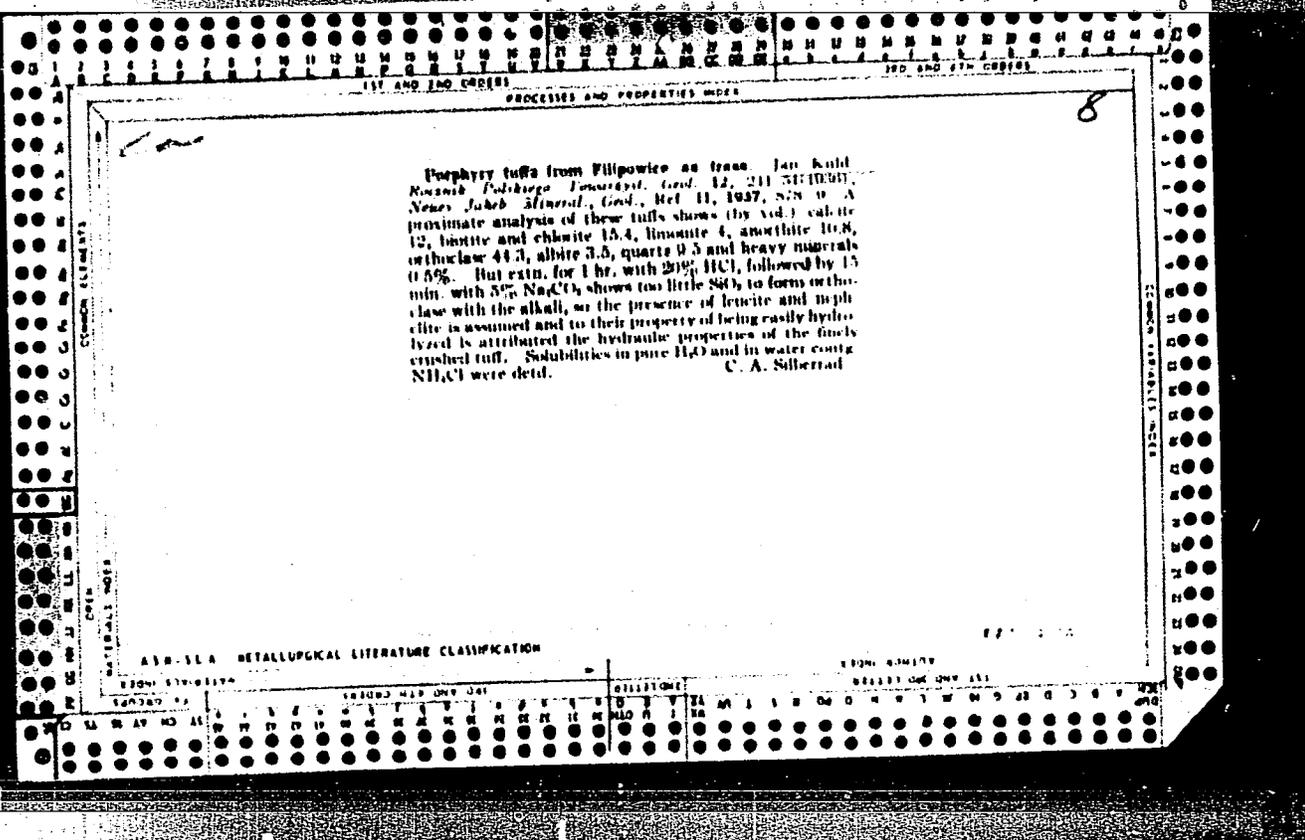
8

CR

The bauxitic clay of Najdriszów and the halloysite of Mierzele, north of the Dabrowsa basin, Poland. Jan Kuhl. *Arch. mineral. soc. ser. Varsovia* 9, 105-106 (1914-15) III. Fritsch (1933). The clays of Najdriszów, d. 2-42, are of the bauxitic type and contain limonite, sericite, quartz, chalcocony, rutile, Al_2O_3 , SiO_2 and halloysite. Their compn. is: SiO_2 31.69, Fe_2O_3 0, Al_2O_3 42.04, Fe_2O_3 0.27, CaO 0.10, MgO 0.15, Na_2O , K_2O traces, H_2O (total) 22.84%. The clays of Mierzele are of the halloysite type and contain sericite, quartz, chalcocony, limonite, rutile and halloysite. Compn.: SiO_2 40.17, Fe_2O_3 0.10, Al_2O_3 34.07, Fe_2O_3 0.03, CaO 0.02, MgO 0.12, Na_2O 0, K_2O 0.03, H_2O (total) 24.70%. Both clays are suitable for the production of fire-resistant clinker and cement and, owing to the readiness of sepn. of $Al(OH)_3$ with hot HCl , for the production of metallic Al . J. W.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

147080 74 13308J H47 ONV J46 811111-047 811111-047 811111-047 811111-047



PROCESSING AND PROPERTIES INDEX

20

CA

Hydraulic lime as a binding material. Jan Kuhl. *Cement* (Warsaw) 3, 65-8, 109-71(1947). -- The technology, phys. and chem. properties of dolomitic (I) and siliceous (II) hydraulic limestones are described. The optimum temp. for burning I in com. furnaces is 700-80°, whereby a part of MgCO₃ is converted to MgO, then by action of H₂O to Mg(OH)₂. Under these conditions CaCO₃ is not affected, and CO₂ acts upon Mg(OH)₂ converting it to MgCO₃. The most favorable burning temp. for II is 800°, and lime thus produced has the best mech. resistance.
T. R. Zegree

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE										FROM DOWNEY									
100000 101 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040 041 042 043 044 045 046 047 048 049 050 051 052 053 054 055 056 057 058 059 060 061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086 087 088 089 090 091 092 093 094 095 096 097 098 099 100										100000 101 011 012 013 014 015 016 017 018 019 020 021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040 041 042 043 044 045 046 047 048 049 050 051 052 053 054 055 056 057 058 059 060 061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079 080 081 082 083 084 085 086 087 088 089 090 091 092 093 094 095 096 097 098 099 100									

CA

Anhydrite of Nowy Ladek and its industrial value.
 Jan Kuhl, *Cement* (Warsaw) 3, 101 (1917). The
 anhydrite (I) constitutes about 40% of the formation, and
 kyanium (II) about 50%. I is a dense and hard material
 of gray-bluish color. It has the following chem. compn.:
 CaO 42.30, MgO traces, SiO₂ 0.28, Fe₂O₃ 0.14, Al₂O₃ 0.10,
 SO₃ 55.76, H₂O 0.60, Cl₂ 0.04%, alkali traces. The chem.
 compn. of II is: CaO 32.00, MgO 0.05, SiO₂ 0.70, Al₂O₃
 0.31, Fe₂O₃ 0.19, SO₃ 44.74, H₂O 20.84%. Pure I is a
 weak hydraulic binding agent, but when thoroughly mixed
 with II in various proportions it constitutes an excellent
 hydraulic material. I can be used also as a raw material
 for H₂SO₄ manuf. T. R. Zegve

INTERNATIONAL LITERATURE CLASSIFICATION

PTA

9

1254

646 9 001

Kuhl J. Contemporary Methods of Testing Bonding Agents.

„Współczesne metody badań tworzyw wiążących”, *Materiały Budowlane*, No. 5, 1951, pp. 122—124.

Raw materials used for the production of bonding agents. Limestones and varieties of limestones (according to calcite content). Method of distinguishing limestones from dolomites. Chemical analysis of marls. Chemical composition of marls suitable for the production of hydraulic lime. Physical and chemical properties of loams: china clay, halloisite and illite. Temperatures at which these materials give up water.

KUHL, J.

1. Tuffogenic rocks in the Carboniferous of Upper Silesia.
J. Kuhl. *Rocznik polsk. towar. Geol.* 22, 167-204 (1972).
(Pub. 1964) (English summary). — Petrographic descriptions
are given with chem. analyses of 3 rocks. A coal seam in
the Knurox Mine is overlain by highly altered diabase (?)
in which natrolite, mordenite, gibbsite, and montmorillonite
were identified optically and by differential thermal analysis.
Michael Fleischer

MEZ
59-55

KU III, F

(10)

Dolomite as building material. Jas. Kun. Materiały
Andolone, 8 (1) 15-18 (1953). - K. discusses the availability of
dolomite in Poland and its important properties. A.D.I.

MET

1951, 3.

"A Short Description of the Chemical and Mineralogical Characteristics of Quartzites of Gory Sulechowski", p. 246, (DZIENNIK BYDZKI, Vol. 9, No. 9, Sept. 1954, Warszawa, Poland)

SC: Monthly List of East European Accessions (SEAL), IC, Vol. 4, No. 3, March 1955, Uncl.

KUHL. JAN.

Petrographic studies of Polish phosphate rocks. J. Jan Kuhl, *Prace Geologiczne Inst. Geologicznego Ser. C, No. 143*, 18 pp (1954) (English summary). — Microscopic and chemical examination was made of phosphates from two Polish deposits of Cretaceous age. They occur in glauconite-bearing sands in the form of aggregations or intercalations with other sand rock, which are termed concretions although their petrographic structure is quite different. The phosphate substance observed in the concretions is mostly cryptocrystalline. It appears in cells of spherulitic and radiating structure. Both the stratum itself and the concretions have qualitatively the same composition, only the proportions are different. The main phosphate minerals are most probably francelite and colophonane. The $CO_2:P_2O_5$ ratio and $F:P_2O_5$ ratio in the concretions closely correspond to those in Russian nodular phosphates. B. C. Metzner

W

KOHL, J.

Jan 2, 1953, K. Szabadinski, Remarks on Formation of Rock

Wzrost i powstawanie skał w Skocznie - Przegląd Geologiczny, t. 3, 1953, pp. 111-118, 16 figs, 3 tabs.

In rock masses deposited lately 50 years ago, there existed highly advanced petrification processes connected with the formation of new minerals and with the creation of a new material, no such petrification processes from the present time as a result of these processes. The petrification processes in the present time are not connected by technical or geological forces.

KUHL, J.; WINNICKI, J.

Preliminary investigations on dressing the fireproof carbonaceous shales from the Brzezinka coal. mine. p.454
(PRZEGLAD GORNICZY, Vol. 12, No. 12, Dec. 1956, Stalinogrod, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

VILHL, JAN

2

Ferruginous sands and near dressing. In Kuhl and
 Dhanzy Korot. *Travaux de la Commission de la Carte
 Géologique de l'URSS*, No. 185, 16 pp. (1970) (English summary).
 The Polish content of ferruginous quartz sands and lumps
 limestone and ferruginous sand. In the sands, quartz,
 orthoclase, microcline, albite, oligoclase, plagioclase,
 calcite, siderite, and hematite. The sands are
 form. The lumps are
 siderite, and limonite which underwent
 The average composition of sands and lumps
 is given in Table 1. The lumps are
 siderite, hematite, and limonite.

Kuhl, J.

POLAND/Geochemistry. Cosmochemistry. Hydrochemistry D

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30846

Author : Kuhl, J., Widawska, J.

Inst : Not given

Title : Communication on the Occurrence of Rare Earths
in the Zinc-Lead Ores in the Krakau-Silesian
Triassic Deposits.

Orig Pub: Prezeglad Geol, 1958, No 1, 6-16

Abstract: The authors have made a microscopic and spectroscopic (method described) study of ore-forming minerals (sphalerite, galenite, calamine), ore mixtures, and concentrates from 8 deposits. From the data obtained in 23 qualitative analyses, the presence of 43 chemical elements in the ores has been confirmed. Sphalerite from the Markhelev deposit contains 0.01% Cd, 0.06%

Card 1/2

POLAND/Geochemistry. Cosmochemistry. Hydrochemistry D

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30846

As, and 0.048% Ag. The authors suggest that the ores were deposited from low-temperature colloidal solutions (epithermal process). -- G. Vorobyev.

Card 2/2

63

KUHL, Jan

The chemical and mineralogical structure of the inorganic mineral substance found in the brown coal of Konin. Pt. 1. Investigation of ashes. Kwartalnik geol 3 no.4:751-766 '59. (EEAI 10:1)

1. Główny Instytut Górnictwa
(Poland--Lignite) (Poland--Minerals)

KUHL, J: LESKIEWICZ, J.

Discards of pyritic siderites from the Staszic Mine near Slupia as a medium for heavy solutions. p.40

PRZEGLAD CORNICZY. (Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Gornictwa) Katowice, Poland
Vol. 15, no.1/2 Jan./Feb. 1959

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no.7, July 1959

Uncl.

KUHL, Jan

Stratified clay-stone siderite from the Orzesze layers of the
Upper Silesian Coal Basin. Gornictwo Gliwice no.3:3-23 '61.

KUHL, Jan

Chemico-mineral structure of an anorganic substance occurring in coal. Kwartalnik geol 5 no.4:801-816 '61.

1. Zakład Petrografii Stosowanej, Główny Instytut Górnictwa, Warszawa.

KUHL, Jan, prof., dr.; DABEK, Henryk, mgr., inż.

Chlorine and phosphorus in Upper Silesia's coal. Przegl gorn
17 no.9:443-446 S '61.

KUHL, Jan, prof., dr., inz.

Vitroil sandstones from the May 1 coal mine in the Upper Silesian Basin. Przegl gorn 18 no.1:20-24 '62.

KUHL, Jan, prof. dr

If and how does the inorganic mineral substance in coal
influence its mechanical properties. Przegl gorn 18 no.10:541-
547 0 '62.

KUHL, Jan, prof. dr

Geological (natural) coke from the Jastrzebie-Moszczenica Mine in the
Upper Silesian Coal Basin. Przegl gorn 19 no.1:40-46 Ja '63.

Praca naukowa CHAJNIECKA, Lidia

Contribution to the knowledge of the Upper Silesian Miocene
volcanic tuffs. *Archiw min.* 25 no.174:281-301 '61 [publ. '65].

1. Department of Petrography of the Central Mining Institute,
Katowice, and Department of Mineralogy of the Silesian Technical
University, Gliwice.

KUHL, Jan; KRUSZEWSKA, Krystyna

Refractory schists from the Laziska layers in the Silesian-Krakow Coal Basin as leading horizons in the parallelization of coal deposits. Acta geol Pol 15 no.1:1-38 '65.

1. Department of Mineralogy and Petrography of the Silesian Technical University, Gliwice, and Department of Petrography of the Central Mining Institute, Katowice. Submitted August 1963.

POLAND

KUHL, Wladyslaw, Laboratory for the Biology of Animal
~~Breeding~~ (Pracownia Biologii Hodowlanej), Zootechnical
Institute (Instytut Zootechniki) in Krakow (Director:
Prof. Dr. Maria KARDYKOWICZ)

"Count of White Blood Corpuscles in Sheep at Various
Stages of the Sexual Cycle."

Warsaw-Lublin, Medycyna Weterynaryjna, Vol 19, No 5, May .
63, pp 267-268.

Abstract: Author reviews findings in the literature re-
garding variation of leukocytes in the vaginal smears of
animals at various stages of the sexual cycle and reports
his own study of such variation in the blood of sheep.
He describes the procedure and tabulates and discusses
the results. It appears that although large leukocyte
variation was evident on the various days of the cycle,
the large coefficients of deviation from the average made
the study inconclusive. The economic significance in-
volved makes further study of the phenomenon desirable.
Of the nine references, seven are Polish and one each
German and English.

1/1

TEICHMANN, G.; HEIDEL, W.; KUHLGATZ, G.

Simulated mitral stenosis in myocardial fibrosis. Cor vasa 4 no.4:
305-312 '62.

1. Kardiologische Arbeitsgemeinschaft der Medizinischen Poliklinik
und Chirurgische Klinik der Universität Rostok.
(MITRAL STENOSIS) (MYOCARDIUM) (HEART DISEASES)
(ELECTROCARDIOGRAPHY)

KUHN, A.

"On the mode of action of hereditary factors. (German)" (p. 295) by Kuhn, A.

SO: Advanced in Contemporary Biology (Uspekhi Sovremenoi Biologii) Vol. VI, No. 2 1937

ECKSTEIN, J.; KUHN, A.; JINDRA, J.; HOLAS, M.

Some physical properties of large CdS monocrystals. Chekhosl fiz
zhurnal 13 no.3:182-187 '63.

1. Vyzkumny ustav monokrystalu, Turnov.

L 43582-65 EWP(e)/EPA(e)-2/EWT(m)/EWP(1)/EPF(n)-2/EPA(*)-2/EWP(b) Feb-10/
ACCESSION NR: AT5009580 P6-7/Pu-4 WE Z/0000/62/000/000/0142/0144

AUTHOR: Kuhn, A. (Kugn, A.)

51
50
B+1

TITLE: Corundum absorption spectra in the visible range

SOURCE: Konference o monokrystalach. 4th, Turnov., 1961. Sbornik referatov.
Turnov, VUM, 1962, 142-144

TOPIC TAGS: absorption spectrum, visible absorption spectrum, synthetic corundum, artificial ruby

ABSTRACT: The absorption spectra of several types of corundum produced by the Spolek pro chemicke a hutni vyrobu (Chemical and Metallurgical Society) in Usti nad Labem for use in artificial gems are described. Corundum with low chrome content, called Rose de France, has two absorption bands in its spectrum (typical of a chrome additive), which occur in the same position for thicknesses from 0.2 to 5 mm. They show minimal filtration at 4050 and 5530 A. If two R5 ruby plates are superimposed with one oriented along and the other across the optical axis, they produce two shades, but one has higher filtration outside the absorption band while the other is higher in that band. Graphs show such spectral characteristics for alexandrite, which has two absorption bands at 4000 and 5600 A, the latter being much

Card 1/2

L 43582-65

ACCESSION NR: AT5009580

weaker. Light kunzite has two equal absorption bands at 4050 and 5600 A, while dark kunzite has a second transverse absorption band at 5600 A and strong dichromism. In contrast to corundum, spinel with Cr_2O_3 added has higher absorption towards the longer wavelengths and maximum absorption at 200 A. Orig. art. has: 9 figures.

ASSOCIATION: Spolek pro chemickou a hutní výrobu, Usti nad Labem (Chemical and Metallurgical Society)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT,OP

NO REF SOV: 000

OTHER: 000

BJB
Card 2/2

L 43581-65 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(1)/EPF(n)-2/EPA(*)-2/EWP(b)/E/

REC(b)-2 Pab-10/Pt-7/Pl-4/Pu-4 IJP(c) GG/WH
ACCESSION NR: AT5009581

Z/0000/62/000/000/0146/0148 66
54
B+1

AUTHOR: Kuhn, A. (Kugn, A.); Vasko, A. (Vashko, A.)

TITLE: absorption and reflection spectra of corundum, spinel and rutile single crystals in the infrared range

SOURCE: Konference o monokrystalech. 4th, Turnov, 1961. Sbornik referatov. Turnov, VUM, 1962, 146-148

TOPIC TAGS: Absorption spectrum, reflection spectrum, infrared spectrum, corundum crystal, spinel crystal, rutile crystal, single crystal, synthetic ruby, synthetic sapphire

ABSTRACT: A study was made of the absorption and reflection spectra of crystals produced by the Spolek pro chemickou a hutni vyrobu (Chemical and Metallurgical Society) by the Verneuil process. A Zeiss UR-10 infrared spectrometer was used to analyze an LiF crystal in the 5.55 μ band, an NaCl prism in the 5.55-11.1 μ band, and a KBr prism in the 5.55-11.1 μ band. Their absolute reflection was estimated in the same device with a reference crystal in the CSAV laborator optiky (Optical Laboratory of the Czechoslovak Academy of Sciences) in white sapphire crystals made by the Verneuil process. The results indicate that the reflection by the Linde company in the USA, indicates that it is practically equal to that of corundum with Cr oxide (Rose de France). Filtration in ruby B5 (corundum with Cr oxide) is 1/2

L 43581-65

ACCESSION NR: AT5009581

0.25% Cr) proved to be about equal in crystals oriented along and transverse to the optical axis, so that corundum may be considered isotropic. Similar tests on ruby R7 and alexandrite with the same 0.5 mm thickness proved that none of the foreign cations used to color these synthetic gems in concentrations up to 1% affect their filtration spectra in the infrared band (5000 to 400 cm^{-1}). Nor are the reflection spectra of corundum and spinel affected by oxides of Cr, V, or Ti in concentrations up to 1%. A diagram tracing the reflection spectra of corundum, spinel and rutile shows that the first two have a practically constant 8% reflection from 5000 to 3200 cm^{-1} , while that in rutile rises to 18% and then declines until it becomes negligible in the 1050 to 1000 cm^{-1} zone. The absorption spectra of spinel and rutile show two lines at about 3300 cm^{-1} which have not been previously described, and measurements were made of the reflex bands of these crystals. Orig. art. has 10 figures.

2

ASSOCIATION: [kuhn] Spolek pro chemicko a hutni vyrobu, Usti nad Labem (Chemical and Metallurgical Society); [Vasko] Laborator optiky CSAV, Prague (Optical Laboratory, CSAV)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, OP

NO REF SOV: 000

OTHER: 007

Card 2/2

KUHN, Andrzej

Suffusion and wash-out of loess soils in Klodzke as a cause of building accidents. Przegł geol 9 no.11:600-603 '61.

1. Instytut Geologiczny, Warszawa.

(Poland--Loess) (Poland--Building)

KÜHN, Andrzej; KUDLINSKA, Ewa

Preliminary results of the research on the Szczecin landslide.
Kwartalnik geol 6 no.2:425-426 '62.

1. Zakład Geologii Inżynierskiej, Instytut Geologiczny, Warszawa.

KUHN, A.

"Vacuum engineering materials" by W. Espe. Vol.3: "Auxiliary materials." Reviewed by A. Kuhn. Jaderna energie 9 no.5:180 My '63.

KUHN, Arno

Journal of Applied Chemistry
Vol. 4 Feb. 1954
Chemical Engineering and
Electrochemical

5
②

Instruments for measuring (health hazard) radiations. Tesla, Saradni Podnik, and Arno Kuhn (B.P. 697,181, 1.12.50. Czechoslov., 1.12.49).— β -, γ -, and fast and thermal neutron radiation are measured singly or simultaneously by means of an ionising chamber having an envelope which permits of γ - and neutron-radiation and a window of material which permits passage of β -radiation. The size and thickness of the window, the material, surface, and size of the ionisation chamber, and the nature and pressure of the gas therein are such that an amount of any of the radiations (or of any combination thereof having the same biological effect) produces the same amount of ions in the ionisation chamber. The chamber is filled with one or more of the following gases: H_2 , N_2 , air, O_2 , CO_2 , a rare gas, an org. gas, or gaseous B compounds at 0.8—3 atm. The walls may be lined with a H-containing compound (paraffin) and a B compound, or with a compound containing N_2 and either Cd or In.

J. M. Jacobs

10-19-59

KUHN, A.

3
KML

Artificial Radioactive Isotopes and Their Use in Industry.
A. Kuhn. (*Chemical Listy*, 1954, 9, Dec., Supplement 45-46).
The principal methods of using radioactive isotopes, and the basic types of detector circuits, are considered.—r. v.

EV
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Kuhn, A.

Use of radioactive isotopes in the chemical industry. p. 189.

Vol. 5, no. 5, May 1955.

CHEMICKY PRUMYSL

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9,
Sept. 1955, Uncl.

KUHN, A.

Measurements of radioactive radiation. p.46. (Nova Technika, Vol. 1, no.2, Feb. 1956)
Praha

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no.7, July 1957. Uncl.

K-4110, H.
Czechoslovakia/Fitting Out of Laboratories -- Instruments, Their Theory, Construction, and Use, R

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1326

Author: Kuhn, A., and Mojzis, J.

Institution: None

Title: Effect of Methyl Alcohol on the Luminescence Properties of Solutions Used in Scintillation Counters

Original

Periodical: Ceskosl. casop. fys., 1956, Vol 6, No 1, 60-63; German

Abstract: The luminescence characteristics of p-terphenyl (I) and 1,4-diphenyl butadiene (II) in binary systems consisting of methyl alcohol (III) and benzene (IV), toluene (V), or xylene (VI), have been investigated. Luminescence (L) was induced by an α -radiating Po source. The highest intensity (i) of L was observed for I when V was used as a solvent and the least, when the solvent was IV; i decreases with increasing temperature. An increase in the concentration of I leads to an increase in i; i is practically constant at concentration

Card 1/2

Czechoslovakia/Fitting Out of Laboratories -- Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1326

Abstract: of I exceeding 0.5% [sic]. III reduces i but does not change the appearance of the L spectrum, which shows a maximum at $\lambda 390 \text{ m}\mu$. For concentrations of III of 30% i is reduced by 35%. An increase of 10° in the temperature reduces i by 10%. The luminescence yield is considerably greater when I and the solvent are luminescently pure. The presence of water causes only an insignificant decrease in i. The i of the L of II is considerably smaller, the greatest value being observed in VI solutions; III reduces the i of L of II to a greater extent than in the case of I. A 0.5% solution of luminescently pure I in the system III-V containing 30% III increases the sensitivity of the counter to β -radiation by a factor of 18.5 compared to the Libby counter (W. F. Libby, Radiocarbon Dating, Chicago, University of Chicago Press, 1952).

Card 2/2

Kc HN, A.

Distr: 4E2c(j)/4E3c/4E3d

Influence of methyl alcohol on the luminescence of solutions used in scintillation counters. Arno Kuhn and Jan Mojziz (Research Inst. Electrotech. Phys., Prague). *Czechoslov. J. Phys.* 6, 401-5 (1958) (in German).—Exptl. results are presented to show that the addn. of up to 30% pure MeOH to a soln. of 0.5% pure terphenyl in toluene does not interfere with the effective luminescence of the original soln. when detg. C¹⁴ activities. The presence of traces of H₂O did not interfere but temp. fluctuations were found to cause serious errors. E. O. Forster

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KUHN, A.

Apparatus of importance to medicine and radiobiology at the Soviet scientific and technic display of the exhibition "Atoms for Peace". Cesk. roentg. 10 no.4:171-175 Dec 56.

1. EGU, Praha.
(RADIOTHERAPY, appar. & instruments
design & operation (Cz))

Z/508/60/000/000/001/018
2073/E320

AUTHORS: Bárta, Čestmir and Kuhn, A.

TITLE: Influence of temperature on the luminescence efficiency of CaWO_4

SOURCE: III. Konference o monokrystalech. Prague, Výzkumný ústav pro minerály, 1960. 5 - 7

TEXT: Using the same method as Botden and Philips (Research Reports, 6, 425-473, 1951) the total emission on γ -irradiation (using a 7 mc Co_{60} source placed at 60 mm from the center of the specimen) was measured in the temperature range 20 - 300 °C on single crystals of 5 mm diameter and 1 mm height. The output was fed to a photomultiplier with a sensitivity of 100 A/1 m. The temperature-dependence of the relative luminescence efficiency was measured for pure CaWO_4 as well as for CaWO_4 doped with Zr^{4+} , U^{4+} , Sc^{3+} , La^{3+} , Ga^{3+} , Ni^{2+} and Cd^{2+} . As an example, the results are plotted (I_{rel} versus temperature) for $\text{CaWO}_4 + 1\% \text{Ga}_2\text{O}_3$. For this material a thermal hysteresis effect was observed. As comparison criteria, the following three values were taken: temperature at which the luminescence efficiency starts to

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Influence of

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decrease; temperature at which the luminescence efficiency drops by 50% of the initial 20 °C value; the relative luminescence efficiency at 300 °C (100% at 20 °C). For $\text{CaWO}_4 + 1\% \text{Ga}_2\text{O}_3$, these values are 30 °C, 152 °C and 20%, respectively. Of interest also was the behaviour of lead-containing specimens; the specimen was slightly yellow immediately after manufacture but after a few hours (under the influence of daylight and particularly under the influence of ultraviolet and X-rays) it changed to violet, indicating the formation of color centers. At 243 °C these centers emitted radiation and a current peak was produced corresponding to about 700% of the current of the other specimens under the same conditions. From then onwards, the current dropped rapidly but the drop in luminescence efficiency was only slight. After cooling, the color again became yellowish and 48 hours in darkness did not produce any change or any formation of color centers. Work is continuing. There are 1 figure and 1 table.

ASSOCIATION: Výzkumný ústav pro minerály, Turnov (Minerals Research Institute, Turnov); Energetický ústav Praha (Power Engineering Institute, Prague)

Card 2/2

KUHN, A.

Z/039/60/021/03/008/028
E140/E135

AUTHORS: Werner Espe and Arno Kuhn

TITLE: Gas Filling for Ionisation Detectors,¹⁹ Especially
Ionisation Chambers and Proportional Counters

PERIODICAL: Slaboproudý Obzor, 1960, Vol 21, Nr 3, pp 156-162

ABSTRACT: Systematic survey of the gases and optimum mixtures of
gases and vapours used for filling ionisation detectors.
After a short general introduction the gaseous fillings
for various kinds of ionisation chambers and proportional
counters are dealt with in detail as well as the
influence of the filling on the qualities of the
detectors. Particular attention is paid to the choice
of gaseous filling in accordance with the kind of
radiation to be detected.

Card
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There are 10 figures, 4 tables and 18 references, of
which 10 are German, 8 English.

ASSOCIATION: Slovenská vysoká škola technická, Bratislava
(Slovak Technical University, Bratislava) (W. Espe);
Spolek pro chemickou a hutní výrobu n.p., Ústí n. L.
(Association for Chemical and Metallurgical Production,
Ústí n L.) (A. Kuhn).

SUBMITTED: August 25, 1959